KE-4000 E

CASSETTE CAR STEREO
WITH AM/FM ELECTRONIC TUNER

KE-4300 E

CASSETTE CAR STEREO
WITH LW/MW/FM ELECTRONIC TUNER

Subject: For Cassette Mechanism, refer to the Service Manual of unit number CX-121SM.

SPECIFICATIONS

General

Power source	DC14.4V (10.8～15.6V allowable)
Grounding system	Negative type
Max. current consumption	1.2A
Power output (max.)	6.5W＋6.5W
(continuous)	4.5W＋4.5W
Load impedance	4Ω (2～8Ω allowable)
Dimensions (W × H × D)	180 × 50 × 150 mm
Nose size (W × H × D)	105 × 42 × 16 mm
Shaft interval	130 mm
Weight	1.8 kg

Tape player

Tape	Compact cassette tape (C-30～C-90)
Tape speed	4.76 cm/sec. (＋0.19 cm/sec. －0.05 cm/sec.)
Fast forward time	Within 100 sec. for C-60
Rewind time	Within 100 sec. for C-60
Wow & flutter	No more than 0.2% (WRMS)
Frequency response	50～12,000 Hz (±3 dB)
Stereo separation	More than 40 dB
Signal-to-noise ratio	More than 45 dB

FM tuner

Frequency range	88～108 MHz
Usable sensitivity	12 dBf (1.1 μV/75Ω)
50 dB quieting sensitivity	17 dBf (1.9 μV/75Ω, mono)
Signal-to-noise ratio	60 dB
Selectivity	70 dB (±400 kHz)
Distortion	0.5% (at 65 dBf, 1 kHz, stereo)
Frequency response	50～12,000 Hz (±3 dB)
Stereo separation	35 dB (at 65 dBf, 1 kHz)

AM (MW) tuner

Frequency range	525～1,605 kHz
Usable sensitivity	30 μV
Selectivity	30 dB (±9 kHz)

LW tuner (KE-4300)

Frequency range	150～280 kHz
Usable sensitivity	70 μV
Selectivity	35 dB (±9 kHz)

Note:
Specifications and the design are subject to possible modification without noice due to improvements.

PIONEER®

CONTENTS

1. PARTS LOCATION

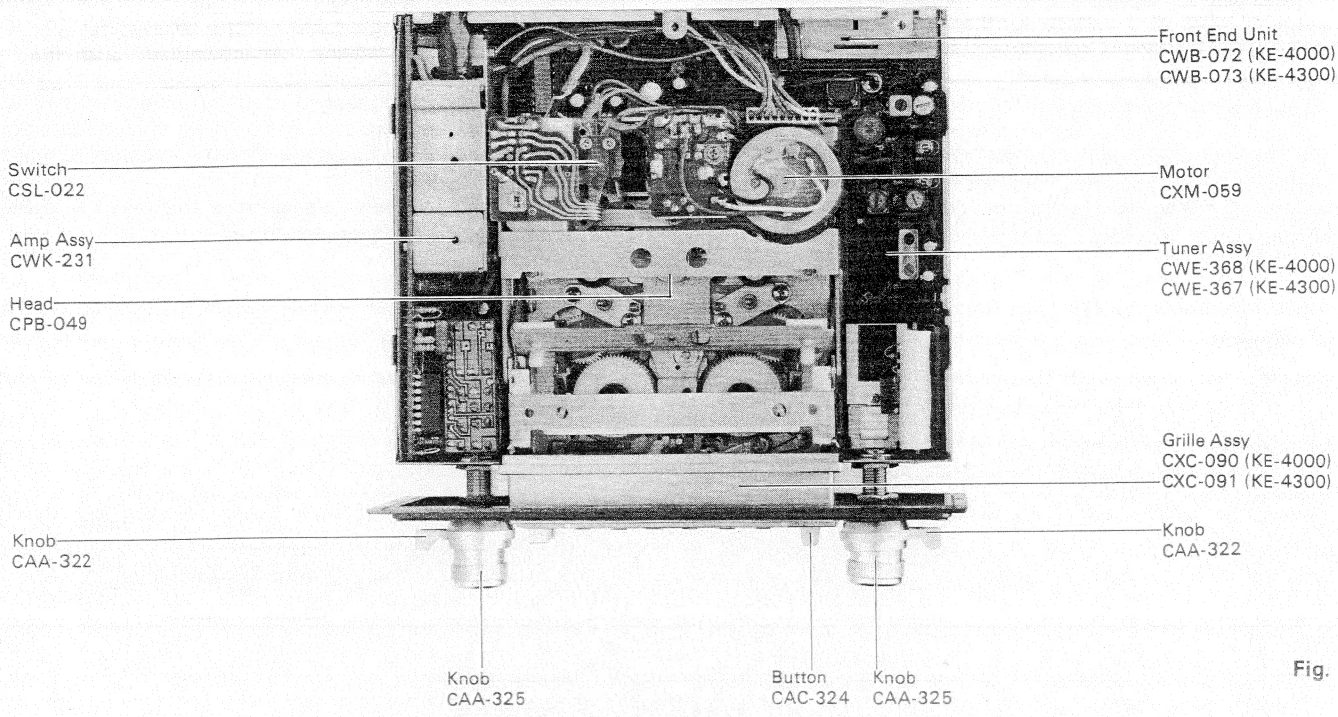


Fig. 1

2. CIRCUIT DESCRIPTION

● **Level Diagram**

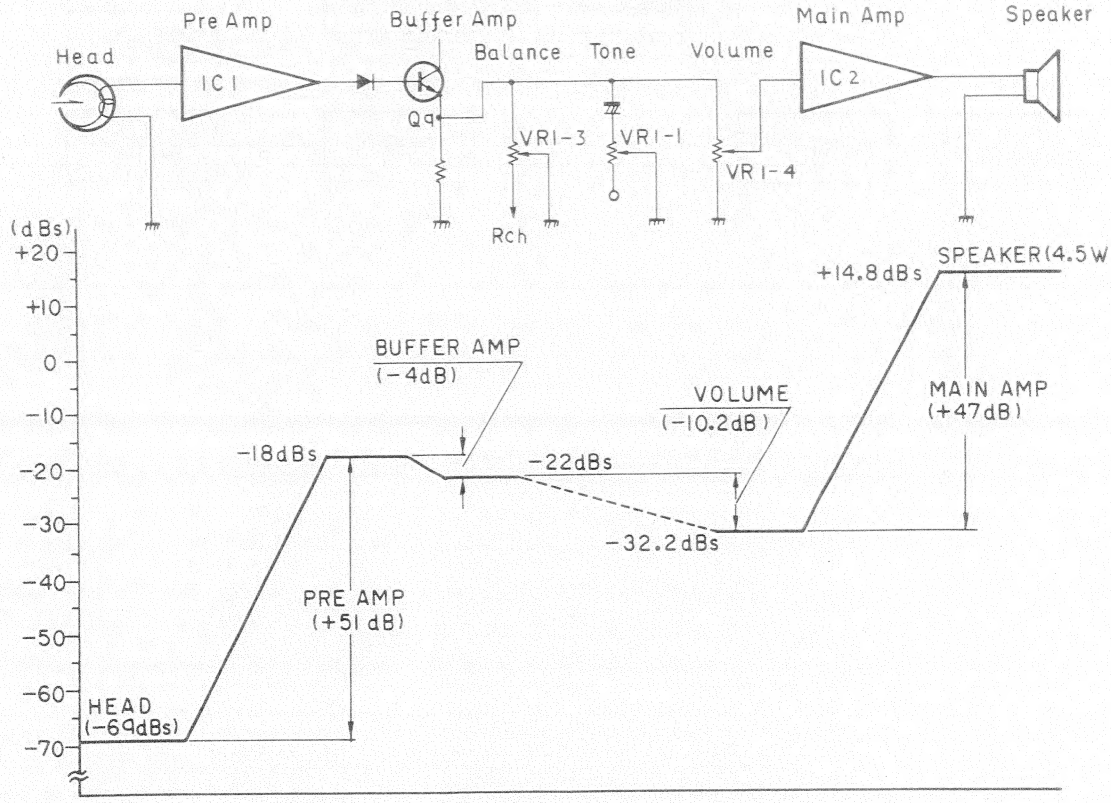


Fig. 2

CIRCUIT DESCRIPTION

● Block Diagram

This digitally controlled circuit with frequency presetting systems consists of a voltage synthesizing circuit incorporating varactor diodes (varactors), and is designed to generate varactor control voltage, memorize tuning frequency, and digitally indicate the tuned frequency.

Turn the tuning knob left or right to feed tuning pulses to LSI (PD1002) so that the contents of the internal counter may be either reduced or increased. The output of the counter is converted through the D/A converter into DC voltage which is applied to the varactor. The tuning frequency rises or falls depending on the direction the tuning knob is turned, permitting selection of the desired stations.

To preset the tuned station, simultaneously push the station selector button and the memory button. The frequency of the selected station is thereby stored in the RAM (Random Access Memory), and pushing only the selector button will recall the frequency stored in memory to again tune the preset station.

The frequency tuned is displayed by an array of 32 LEDs. This readout is completely electronic.

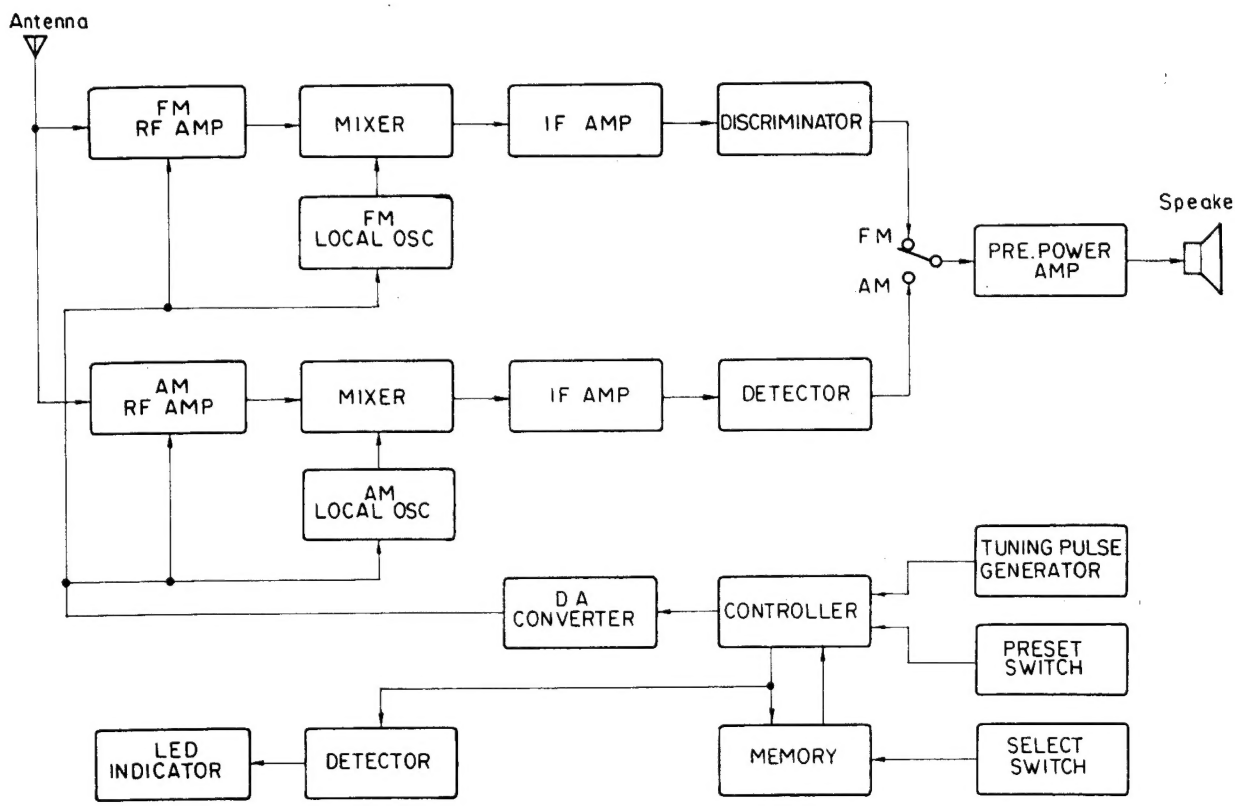


Fig. 3

3. ADJUSTMENT

3.1 FM IF ADJUSTMENT

● **Connection Diagram**

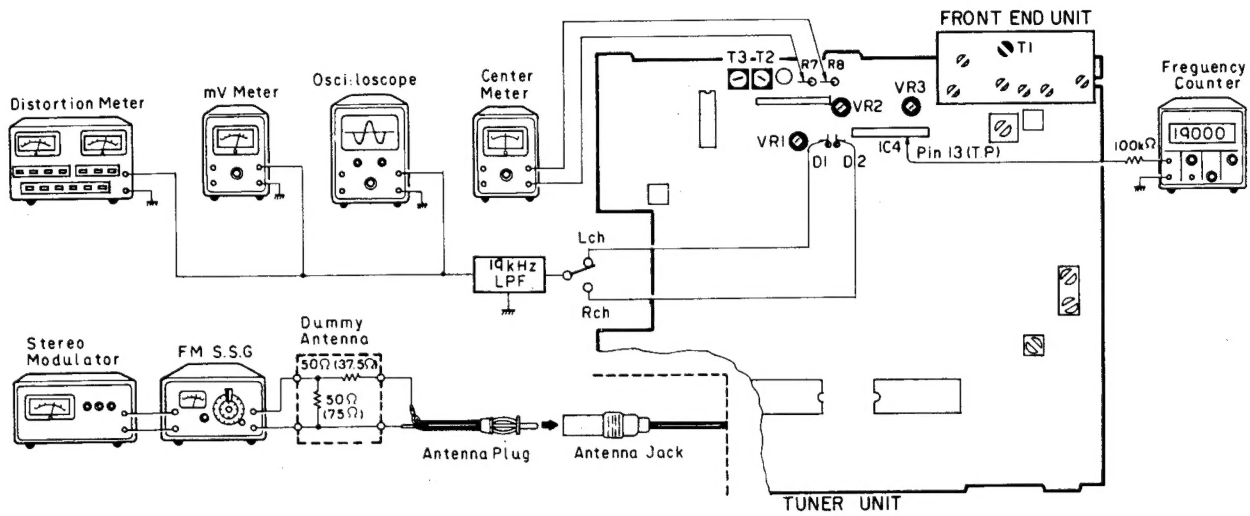


Fig. 4

● **To Adjust**

1. Add input signal of zero from SSG and adjust T2 so that the pointer of center meter (use one graduated for over 200 μA) will come to the center.
2. Set SSG to 100% modulation at 400 Hz, and apply an output signal of 98 MHz, 60 dB.
3. Adjust T3 so that separated signals will have but a minimum distortion.
4. Add output signal of 98 MHz 60 dB from SSG, multisignal of modulated frequency 1 kHz of stereo modulator and tune to 98 MHz on the dial (the pointer of the center meter is at the center).
5. Adjust T1 (front end unit) so that separated signal will be minimal in its distortion factor.

3.2 FM MPX ADJUSTMENT

● **Connection Diagram (Shown in Fig. 4)**

● **To Adjust**

1. Select the band switch to AUTO position.
2. Obtain non-modulation signal by setting SSG output at 60 dB (μV) 98 MHz. Adjust VR3 so that the frequency counter indicates 19 kHz ±30 Hz.
3. Obtain stereo modulation signal by setting SSG output at 60 dB (μV). Adjust VR2 to secure maximum separation.

3.3 AUTO LEVEL ADJUSTMENT

● **Connection Diagram (Shown in Fig. 4)**

● **To Adjust**

1. Select the band switch to AUTO position.
2. Set SSG at 98 MHz and tune using the tuning knob.
3. Set SSG to an output level of 20 dB (μV), and adjust VR1 to a separation of 5 dB (between the right and left channels).

ADJUSTMENT

3.4 FM TRACKING ADJUSTMENT

● **Connection Diagram**

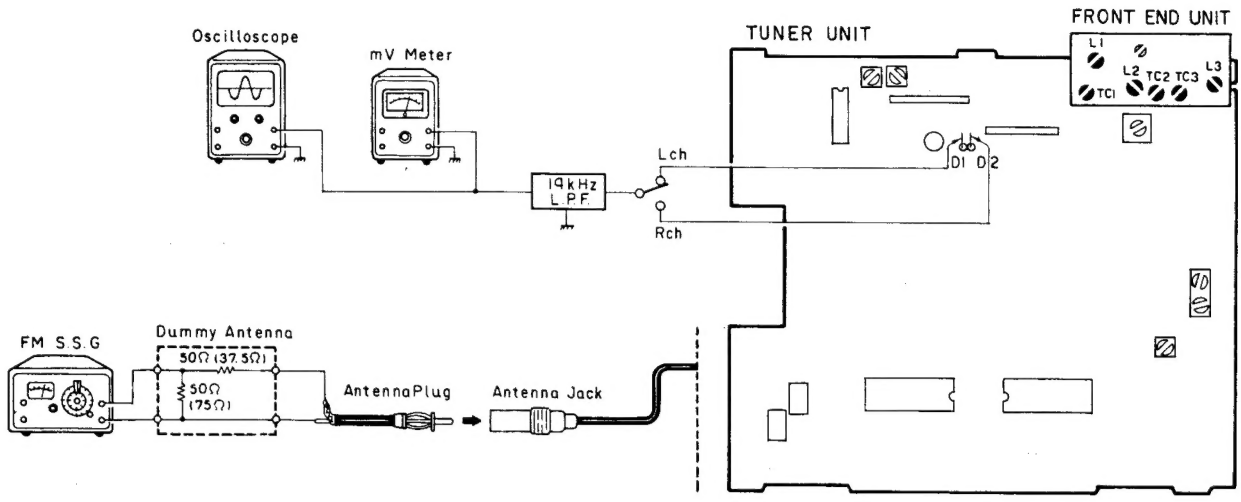


Fig. 5

● **To Adjust**

In case of KE-4000

SSG Frequency	Pointer Position	Adjustment point	Note
1. 87.0 MHz (400 Hz, 100% modulation), output level 10 dB (μV)	Minimum	L3	87.0 MHz can be received
2. 109 MHz (400 Hz, 100% modulation), output level 10 dB (μV)	Maximum	TC3	109 MHz can be received
3. Repeat items (1) and (2) alternately so that broadcast can be received at the frequency between 87.0 MHz and 109 MHz.			
4. 90 MHz (400 Hz, 100% modulation), output level 5 dB (μV)	Tuned position	L1, L2	Maximum output
5. 106 MHz (400 Hz, 100% modulation), output level 5 dB (μV)	Tuned position	TC1, TC2	Maximum output
6. Repat items (4) and (5) alternately so that the mV meter indicates maximum output.			

ADJUSTMENT

In case of KE-4300

SSG Frequency	Pointer Position	Adjustment point	Note
1. 87.0 MHz (400 Hz, 100% modulation), output level 10 dB (μV)	Minimum	L3	87.0 MHz can be received
2. 105 MHz (400 Hz, 100% modulation), output level 10 dB (μV)	Maximum	TC3	105 MHz can be received
3. Repeat items (1) and (2) alternately so that broadcast can be received at the frequency between 87.0 MHz and 105 MHz.			
4. 90 MHz (400 Hz, 100% modulation), output level 5 dB (μV)	Tuned position	L1, L2	Maximum output
5. 104 MHz (400 Hz, 100% modulation), output level 5 dB (μV)	Tuned position	TC1, TC2	Maximum output
6. Repat items (4) and (5) alternately so that the mV meter indicates maximum output.			

3.5 AM (MW) IF ADJUSTMENT

● Connection Diagram

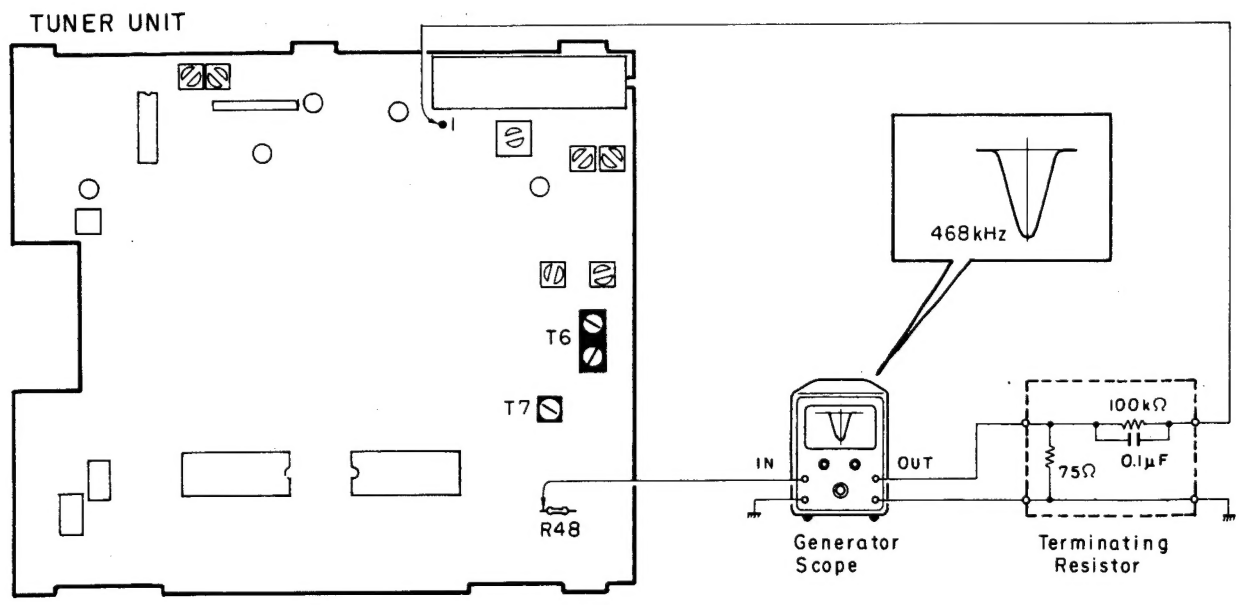


Fig. 6

● To Adjust

1. Set Generator Scope as Follows:
   Frequency centering on sweep..... 468 kHz
   Input level..... 0.3Vp-p/cm
   Output level ..... 3 mV~10 mV
2. Turn the cores of T6 and T7 and adjust so that U-curve will be at maximum amplitude and best symmetry.

ADJUSTMENT

3.6 AM (MW) TRACKING ADJUSTMENT

● **Connection Diagram**

In case of KE-4000

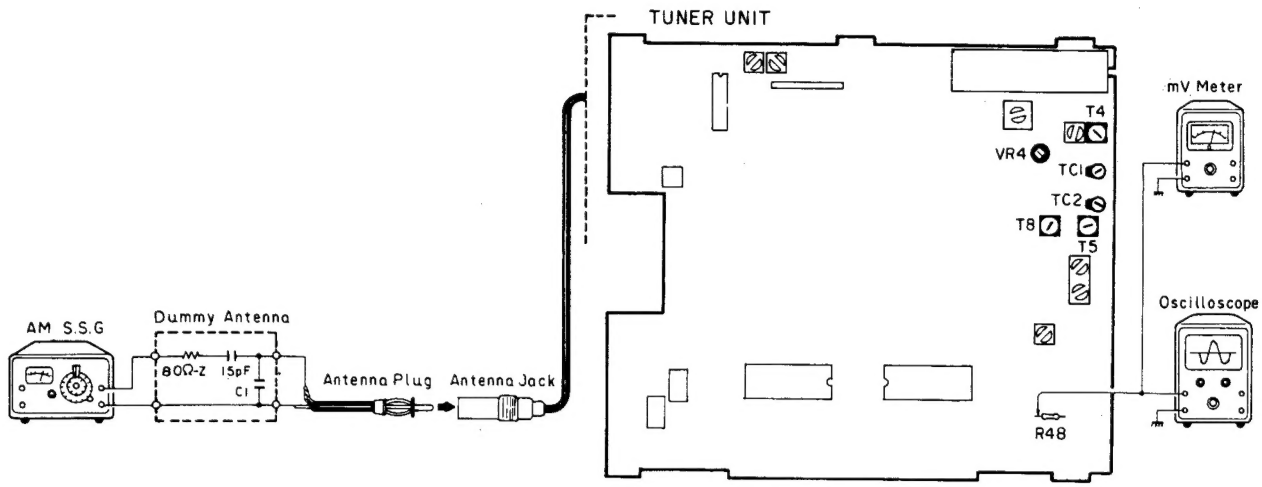


Fig. 7

In case of KE-4300

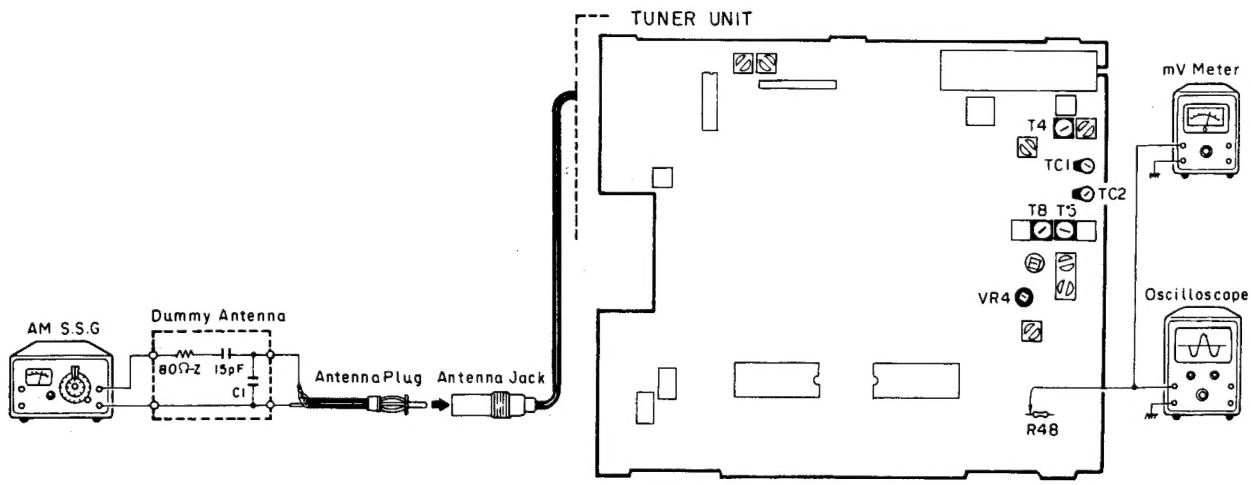


Fig. 8

NOTICE:

Select C1 so that total capacity of 80 pF is attained from the direction of the receiver jack.

Z: Output impedance of the SSG.

ADJUSTMENT

● To Adjust

SSG Frequency	Pointer Position	Adjustment Point	Note
1. 515 kHz (400 Hz, 30% modulation), output level 30 dB (μV)	Minimum	VR4	515 kHz can be received
2. 1,630 kHz (400 Hz, 30% modulation), output level 30 dB (μV)	Maximum	T8	1,630 kHz can be received
3. Repeat (1) and (2) alternately and adjust so that broadcast can be received at the frequency between 515 kHz and 1,630 kHz.			
4. 600 kHz (400 Hz, 30% modulation), output level 30 dB (μV)	Tune to 600 kHz	T4, T5	mV Meter at maximum
5. 1,400 kHz (400 Hz, 30% modulation), output level 30 dB (μV)	Tune to 1,400 kHz	TC1, TC2	mV Meter at maximum

3.7 LW TRACKING ADJUSTMENT (KE-4300)

● Connection Diagram

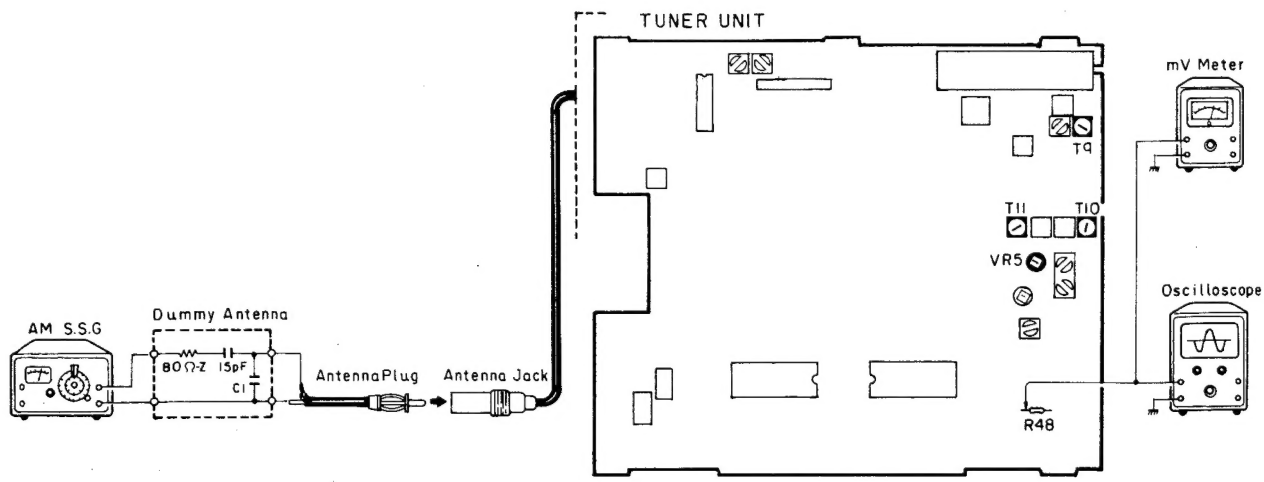


Fig. 9

NOTICE:
Select C1 so that total capacity of 80 pF is attained from the direction of receiver jack.
Z: Output impedance of the S.S.G.

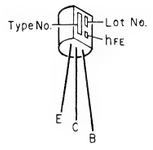
ADJUSTMENT

● To Adjust

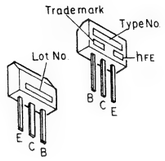
SSG Frequency	Pointer Position	Adjustment Point	Note
1. 145 kHz (400 Hz, 30% modulation), output level 40 dB (μV)	Minimum	VR5	145 kHz can be received
2. 295 kHz (400 Hz, 30% modulation), output level 40 dB (μV)	Maximum	T11	295 kHz can be received
3. Repeat (1) and (2) alternately and adjust so that broadcast can be received at the frequency between 145 kHz and 295 kHz.			
4. 215 kHz (400 Hz, 30% modulation), output level 40 dB (μV)	Tune to 215 kHz	T9, T10	mV Meter at maximum

● IC's and Transistors

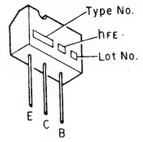
2SC1674
2SC1675
2SA952



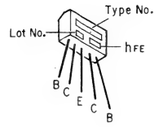
2SC1213A
2SC1214
2SC535
2SC460



2SC2021
2SC2021LN
2SA786



2SC1583
2SA798



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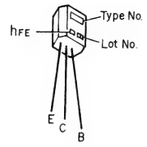

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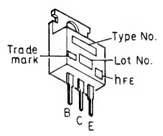

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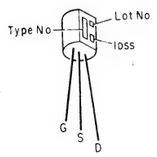

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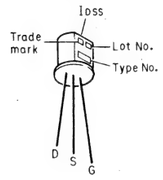
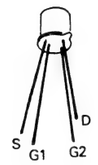
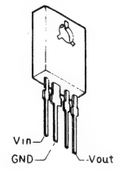


SD306PA



LVC509



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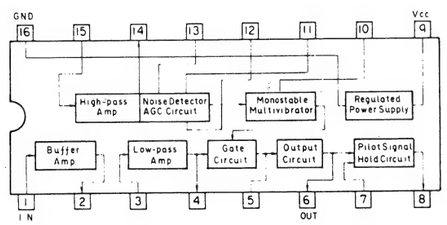

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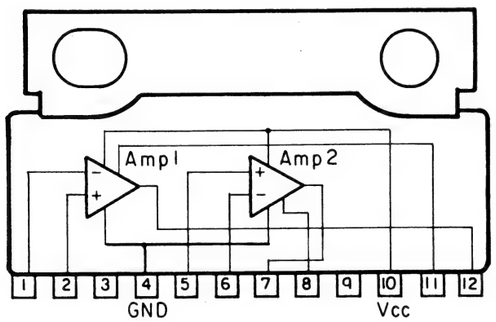

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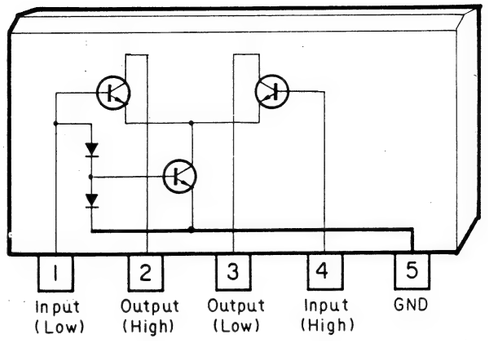

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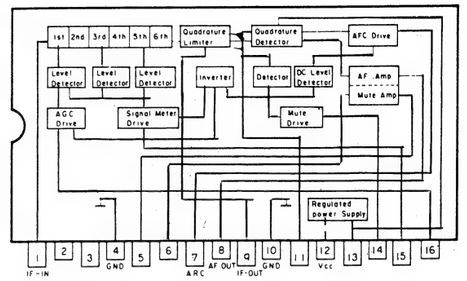

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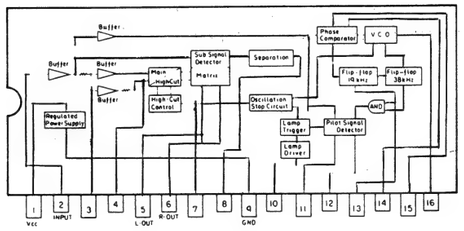
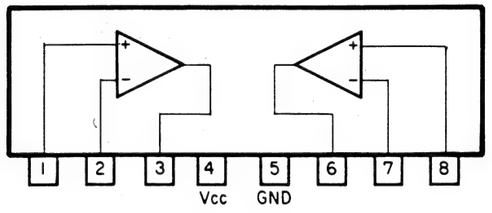
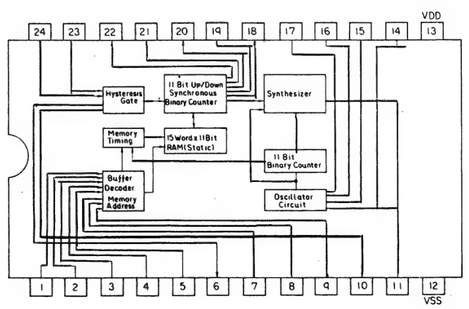


MB3106M



PD4003



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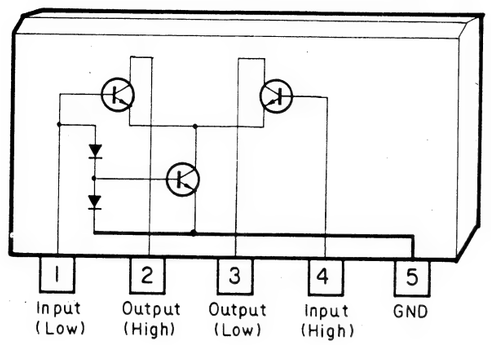

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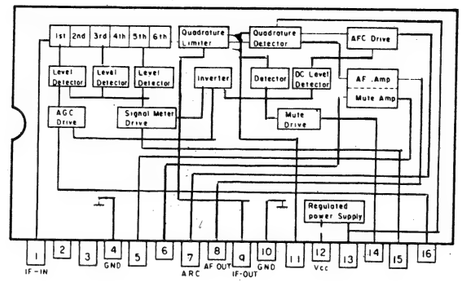

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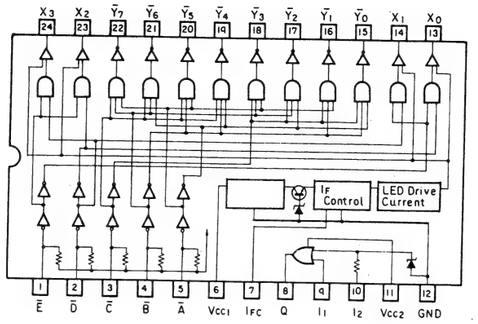

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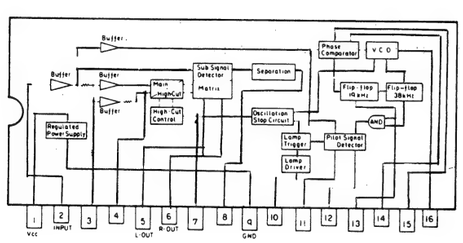

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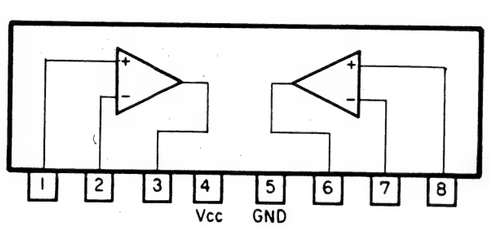

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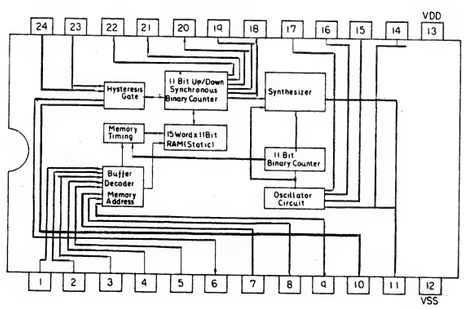
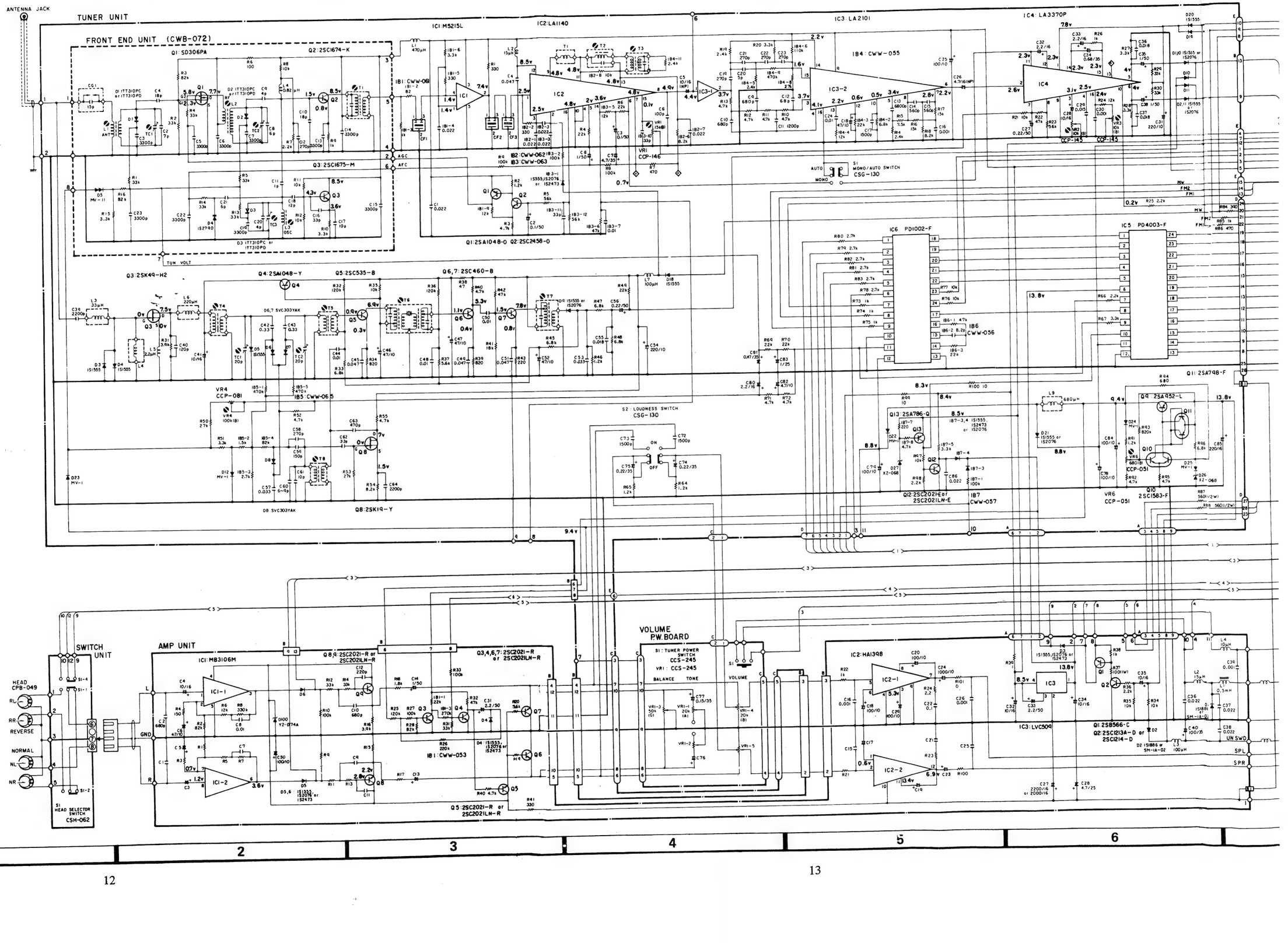


4. SCHEMATIC CIRCUIT DIAGRAM (KE-4000)



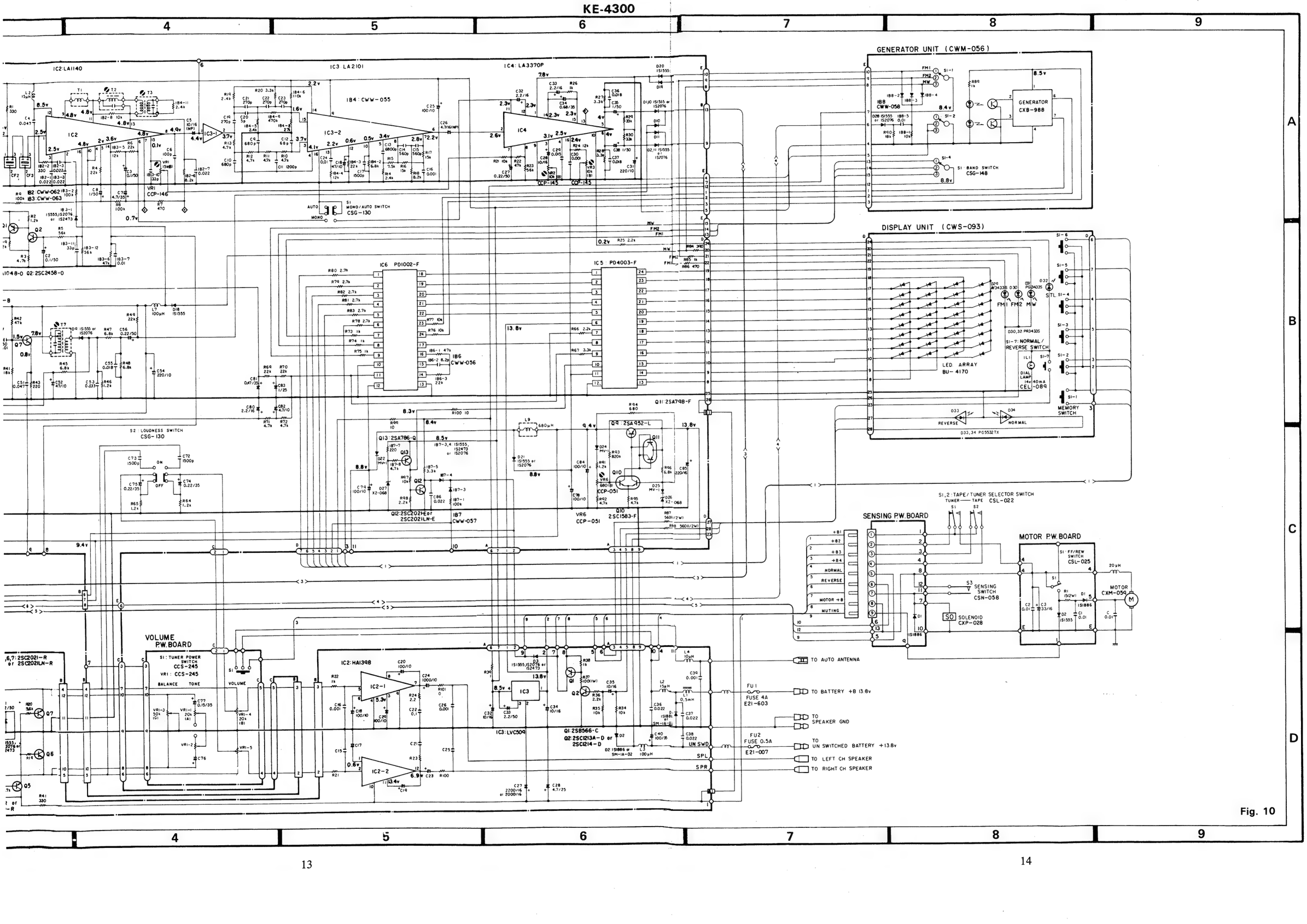
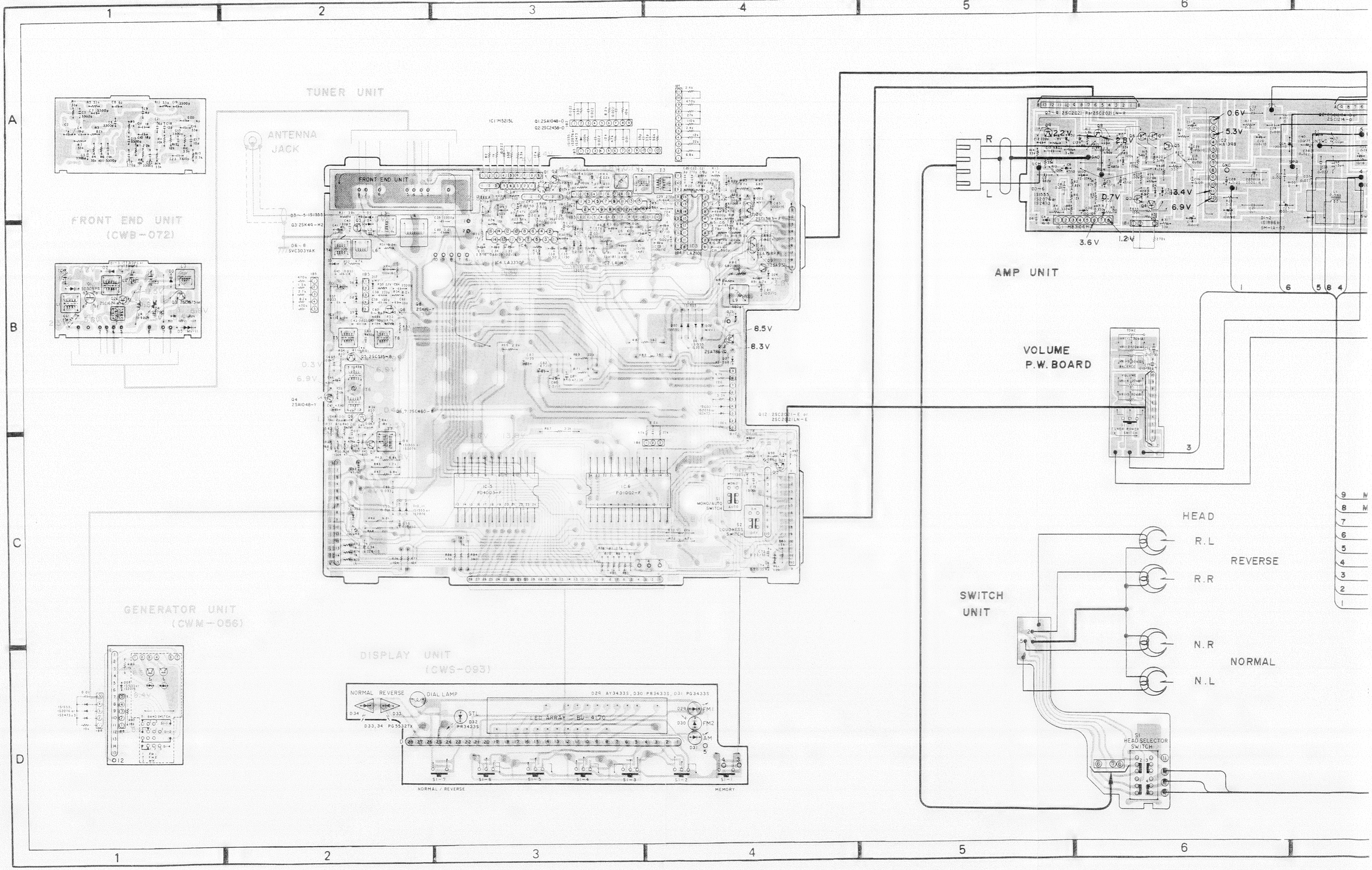

4
5
6
7
8
9
A
B
C
D
IC2:LA1140
IC3 LA2101
IC4: LA3370P
IB4 : CWW-055
IB2:CWW-062
IB3:CWW-063
VR1 CCP-146
CCP-145
S1 MONO/AUTO SWITCH CSG-130
IC6 PD1002-F
IC5 PD4003-F
IB6 CWW-056
Q11:2SA798-F
Q9 :2SA952-L
Q13:2SA786-Q
Q12:2SC2021-E or 2SC2021LN-E
IB7 CWW-057
Q10 2SC1583-F
VR6 CCP-051
S2 : LOUDNESS SWITCH CSG-130
ON
OFF
GENERATOR UNIT (CWM-056)
IB8 CWW-058
GENERATOR CXB-988
S1 BAND SWITCH CSG-148
DISPLAY UNIT (CWS-093)
LED ARRAY BU-4170
DIAL LAMP 14v 40mA CEL-089
MEMORY SWITCH
REVERSE
NORMAL
S1,2 : TAPE/TUNER SELECTOR SWITCH CSL-022
SENSING P.W.BOARD
SENSING SWITCH CSN-058
SOLENOID CXP-028
MOTOR P.W.BOARD
S1 : FF/REW SWITCH CSL-025
MOTOR CXM-059
VOLUME P.W.BOARD
S1 : TUNER POWER SWITCH CCS-245
VR1 : CCS-245
BALANCE
TONE
VOLUME
IC2:HAI398
IC3:LVC509
Q1:2SB566-C
Q2:2SC1213A-D or 2SC1214-D
TO AUTO ANTENNA
FU1 FUSE 4A E21-603
TO BATTERY +B 13.8v
TO SPEAKER GND
FU2 FUSE 0.5A E21-007
TO UN SWITCHED BATTERY +13.8v
TO LEFT CH SPEAKER
TO RIGHT CH SPEAKER

Fig. 10

5. CONNECTION DIAGRAM (KE-4000)



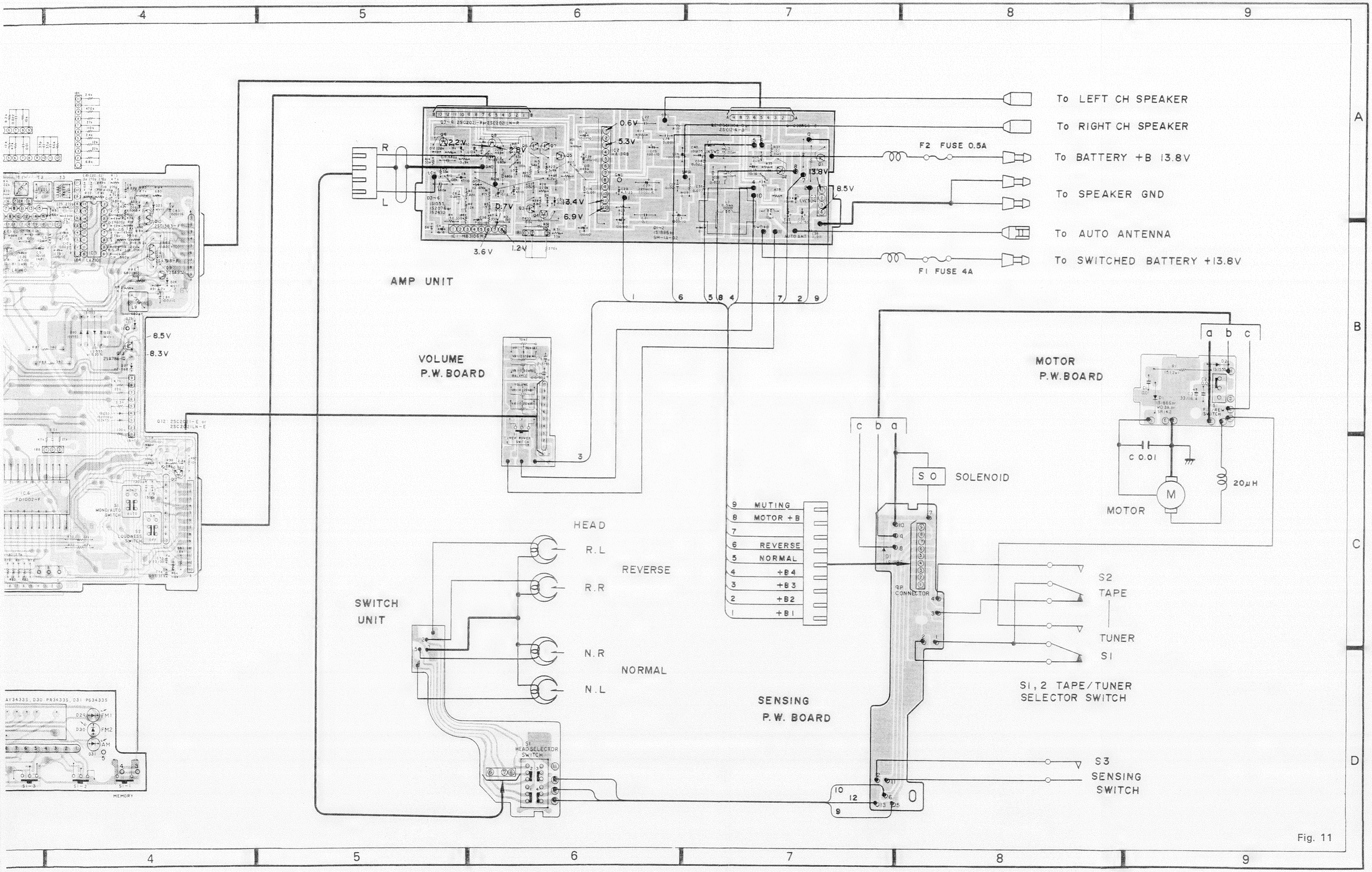
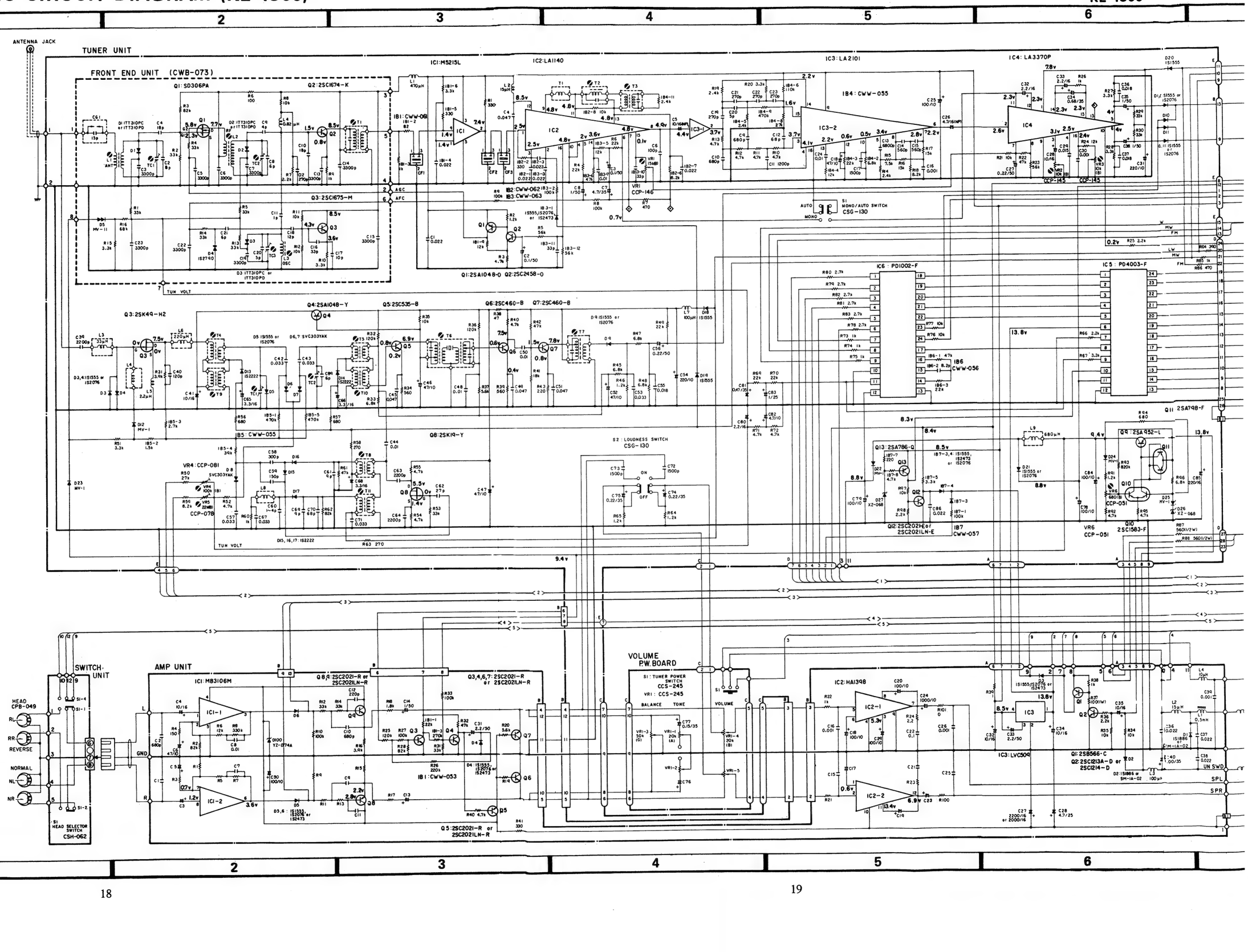

To LEFT CH SPEAKER
To RIGHT CH SPEAKER
F2 FUSE 0.5A
To BATTERY +B 13.8V
To SPEAKER GND
To AUTO ANTENNA
To SWITCHED BATTERY +13.8V
F1 FUSE 4A
AMP UNIT
VOLUME
P.W. BOARD
MOTOR
P.W. BOARD
SOLENOID
MOTOR
20μH
C 0.01
MUTING
MOTOR +B
REVERSE
NORMAL
+B4
+B3
+B2
+B1
SENSING
P.W. BOARD
HEAD
R.L
R.R
N.R
N.L
REVERSE
NORMAL
SWITCH
UNIT
S2
TAPE
TUNER
S1
S1, 2 TAPE/TUNER
SELECTOR SWITCH
S3
SENSING
SWITCH
8.5V
8.3V
MEMORY

Fig. 11

6. SCHEMATIC CIRCUIT DIAGRAM (KE-4300)



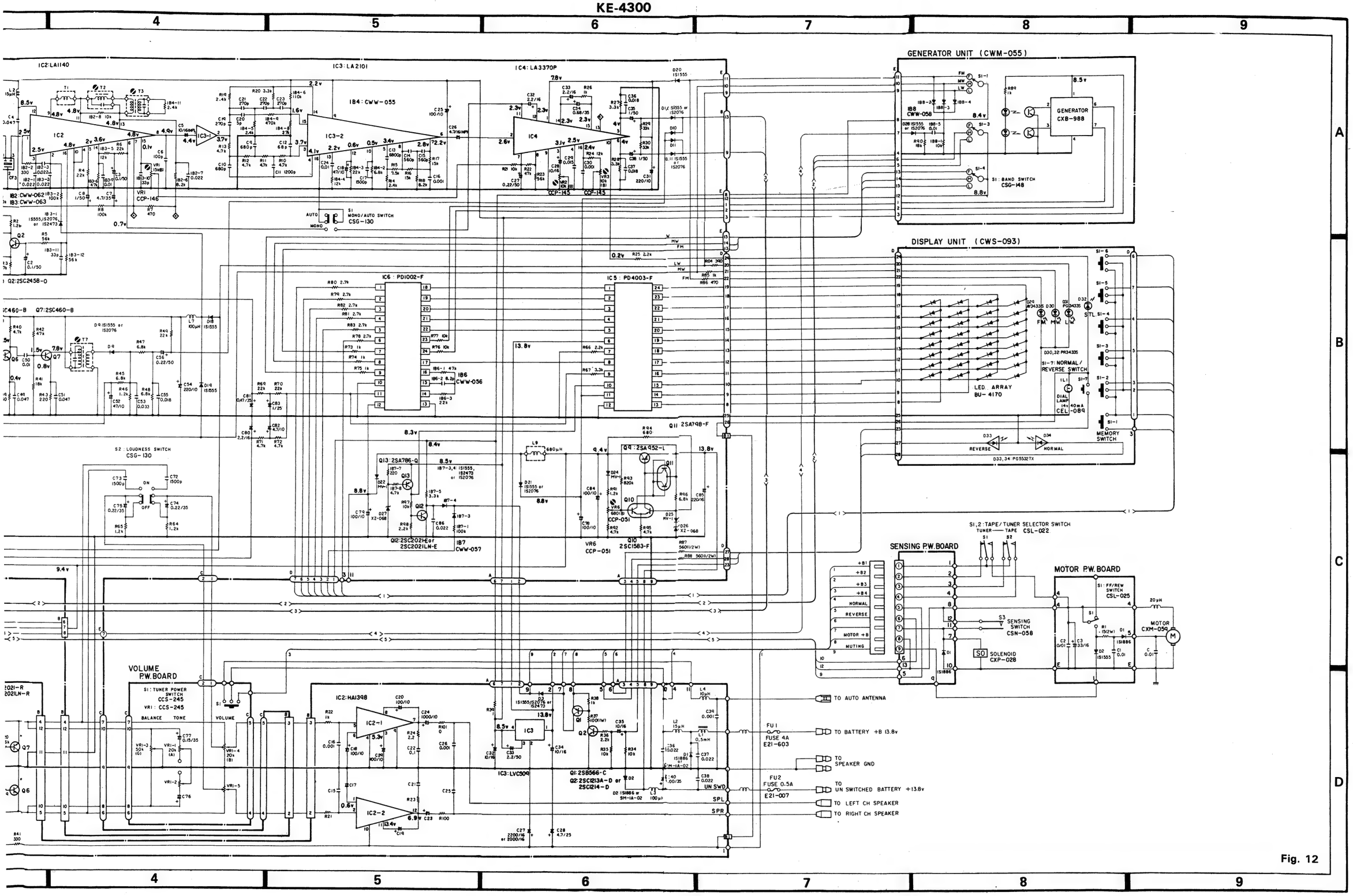
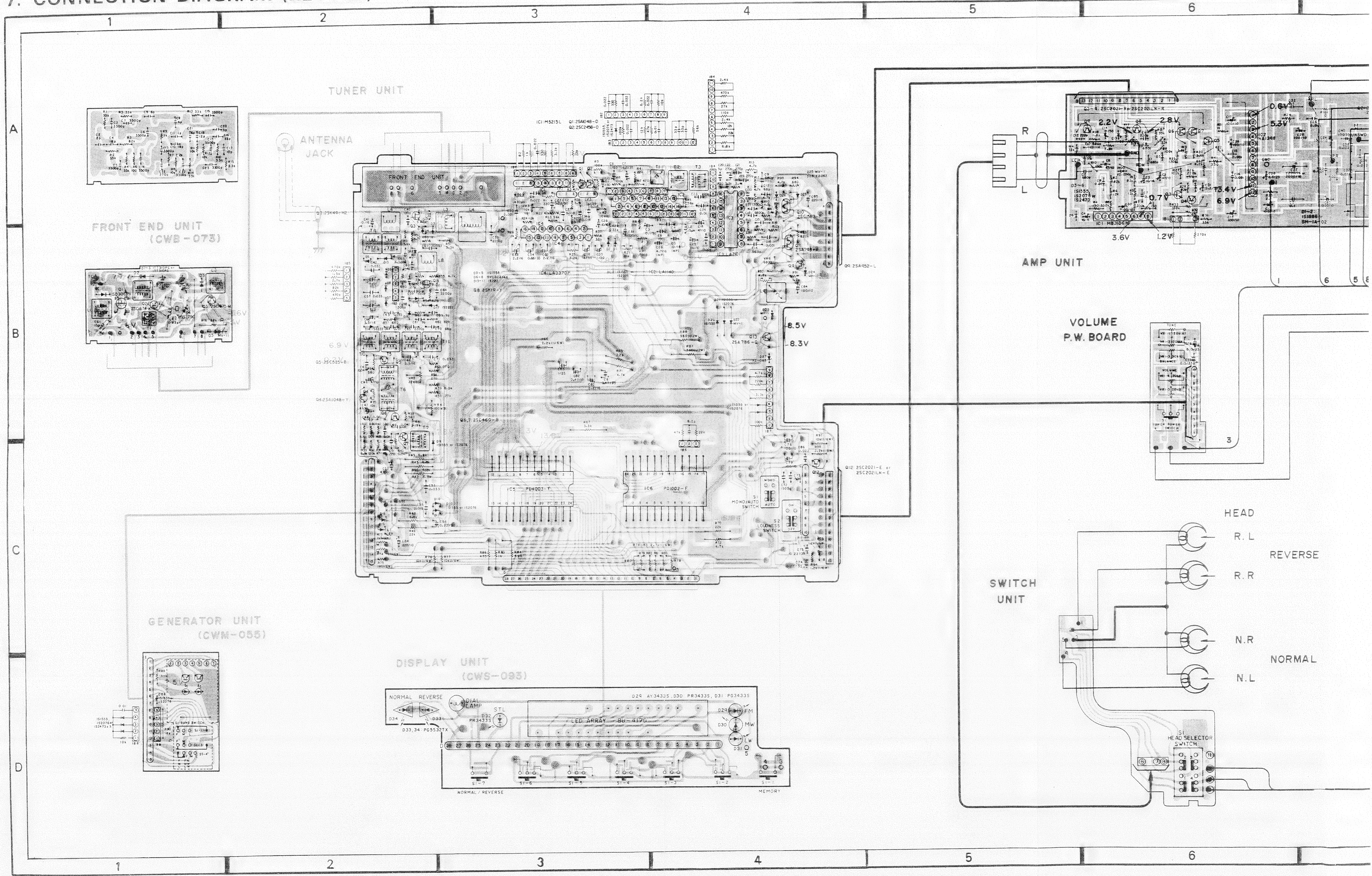

4
5
6
7
8
9
A
B
C
D
IC2:LA1140
IC3:LA2101
IC4:LA3370P
IB4:CWW-055
IB2:CWW-062
IB3:CWW-063
VR1 CCP-146
CCP-145
S1 MONO/AUTO SWITCH CSG-130
Q2:2SC2458-O
Q7:2SC460-B
Q11 2SA798-F
IC6:PD1002-F
IC5:PD4003-F
IB6 CWW-056
Q13:2SA786-Q
Q12:2SC202IE or 2SC202ILN-E
IB7 CWW-057
Q9:2SA952-L
Q10 2SC1583-F
VR6 CCP-051
S2:LOUDNESS SWITCH CSG-130
GENERATOR UNIT (CWM-055)
IB8 CWW-058
GENERATOR CXB-988
S1:BAND SWITCH CSG-148
DISPLAY UNIT (CWS-093)
LED. ARRAY BU-4170
S1-7:NORMAL/ REVERSE SWITCH
DIAL LAMP (4V,40mA) CEL-089
MEMORY SWITCH
REVERSE
NORMAL
D33,34:PG5532TX
S1,2:TAPE/TUNER SELECTOR SWITCH TUNER—TAPE CSL-022
SENSING P.W.BOARD
S3 SENSING SWITCH CSN-058
SO SOLENOID CXP-028
MOTOR P.W.BOARD
S1:FF/REW SWITCH CSL-025
MOTOR CXM-050
VOLUME P.W.BOARD
S1:TUNER POWER SWITCH CCS-245
VR1:CCS-245
BALANCE
TONE
VOLUME
IC2:HA1398
IC3:LVC504
Q1:2SB566-C
Q2:2SC1213A-D or 2SC1214-D
TO AUTO ANTENNA
FU1 FUSE 4A E21-603
TO BATTERY +B 13.8v
TO SPEAKER GND
FU2 FUSE 0.5A E21-007
TO UN SWITCHED BATTERY +13.8v
TO LEFT CH SPEAKER
TO RIGHT CH SPEAKER

Fig. 12

7. CONNECTION DIAGRAM (KE-4300)



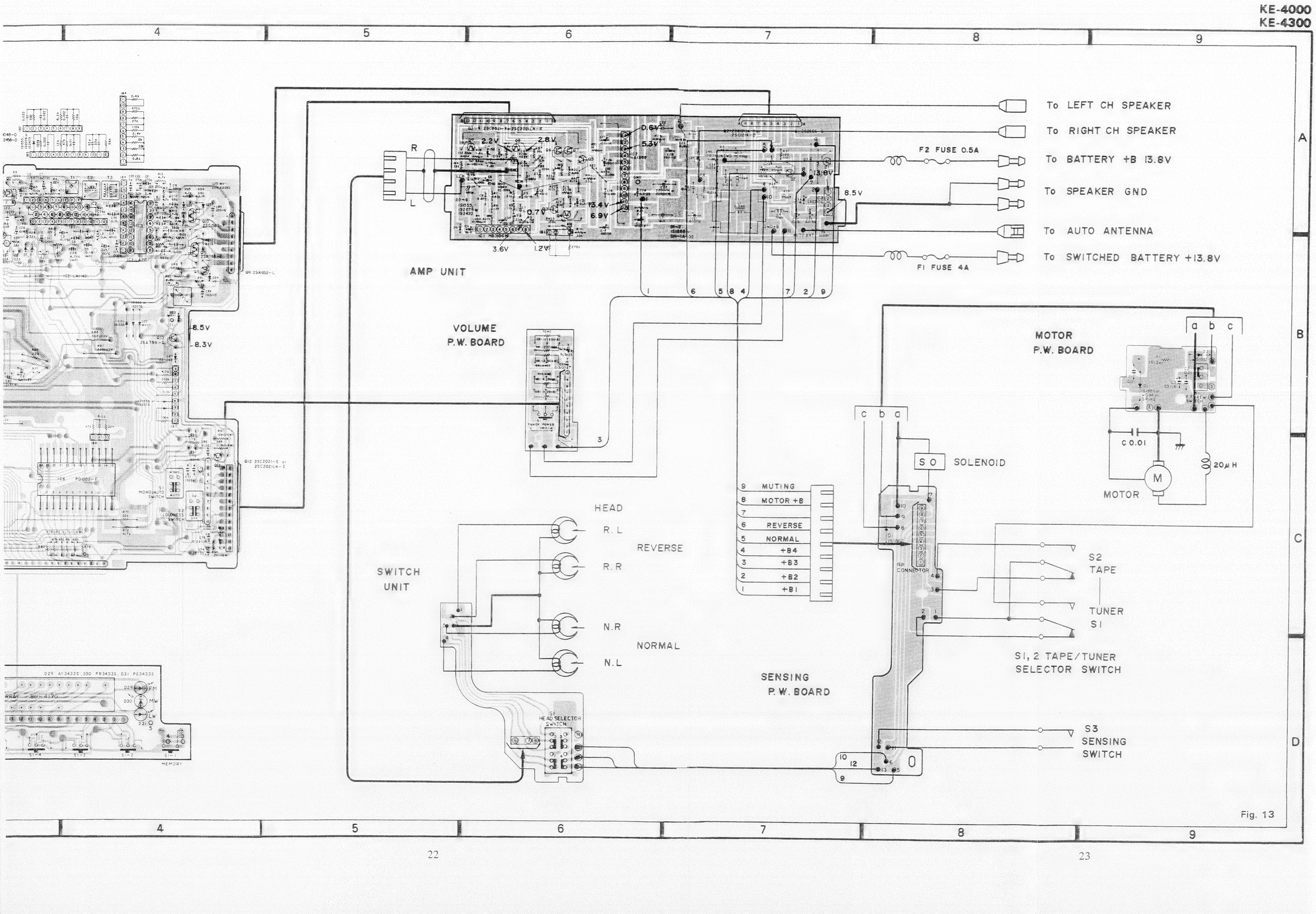

4
5
6
7
8
9
A
B
C
D
AMP UNIT
R
L
2.2V
2.8V
0.6V
5.3V
13.8V
8.5V
13.4V
6.9V
0.7V
3.6V
1.2V
To LEFT CH SPEAKER
To RIGHT CH SPEAKER
F2 FUSE 0.5A
To BATTERY +B 13.8V
To SPEAKER GND
To AUTO ANTENNA
To SWITCHED BATTERY +13.8V
F1 FUSE 4A
VOLUME
P.W. BOARD
MOTOR
P.W. BOARD
SOLENOID
C 0.01
20μH
M
MOTOR
9 MUTING
8 MOTOR +B
7
6 REVERSE
5 NORMAL
4 +B4
3 +B3
2 +B2
1 +B1
HEAD
R.L
R.R
N.R
N.L
REVERSE
NORMAL
SWITCH
UNIT
S1
HEAD SELECTOR
SWITCH
SENSING
P.W. BOARD
QR
CONNECTOR
S2
TAPE
TUNER
S1
S1, 2 TAPE/TUNER
SELECTOR SWITCH
S3
SENSING
SWITCH
8.5V
8.3V
Q12 2SC2021-E or
2SC2021LN-E
D29 AY3433S, D30 PR3433S, D31 PG3433S
D29 FM
D30 MW
D31 LW
MEMORY

Fig. 13

8. CABINET EXPLODED VIEW

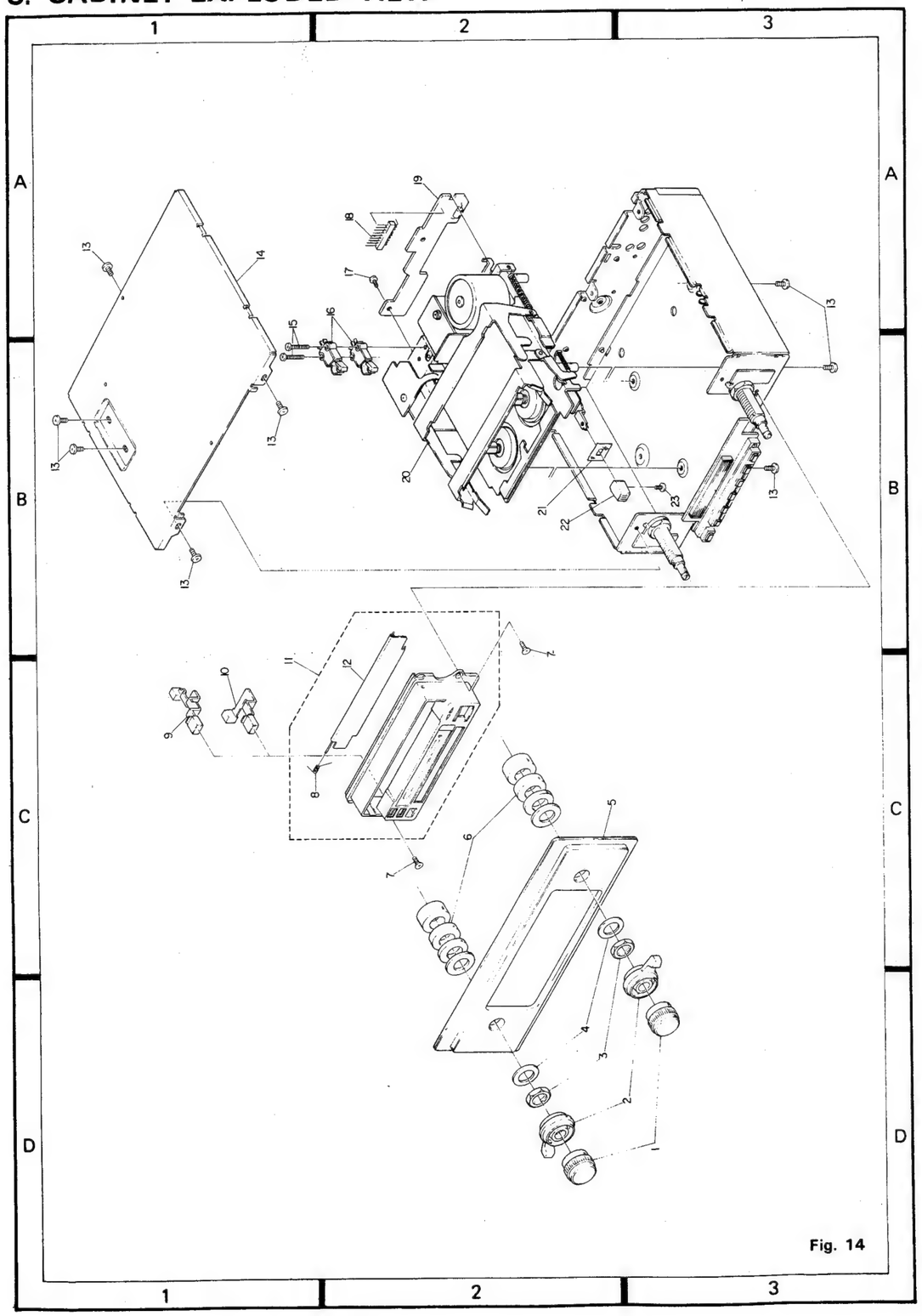
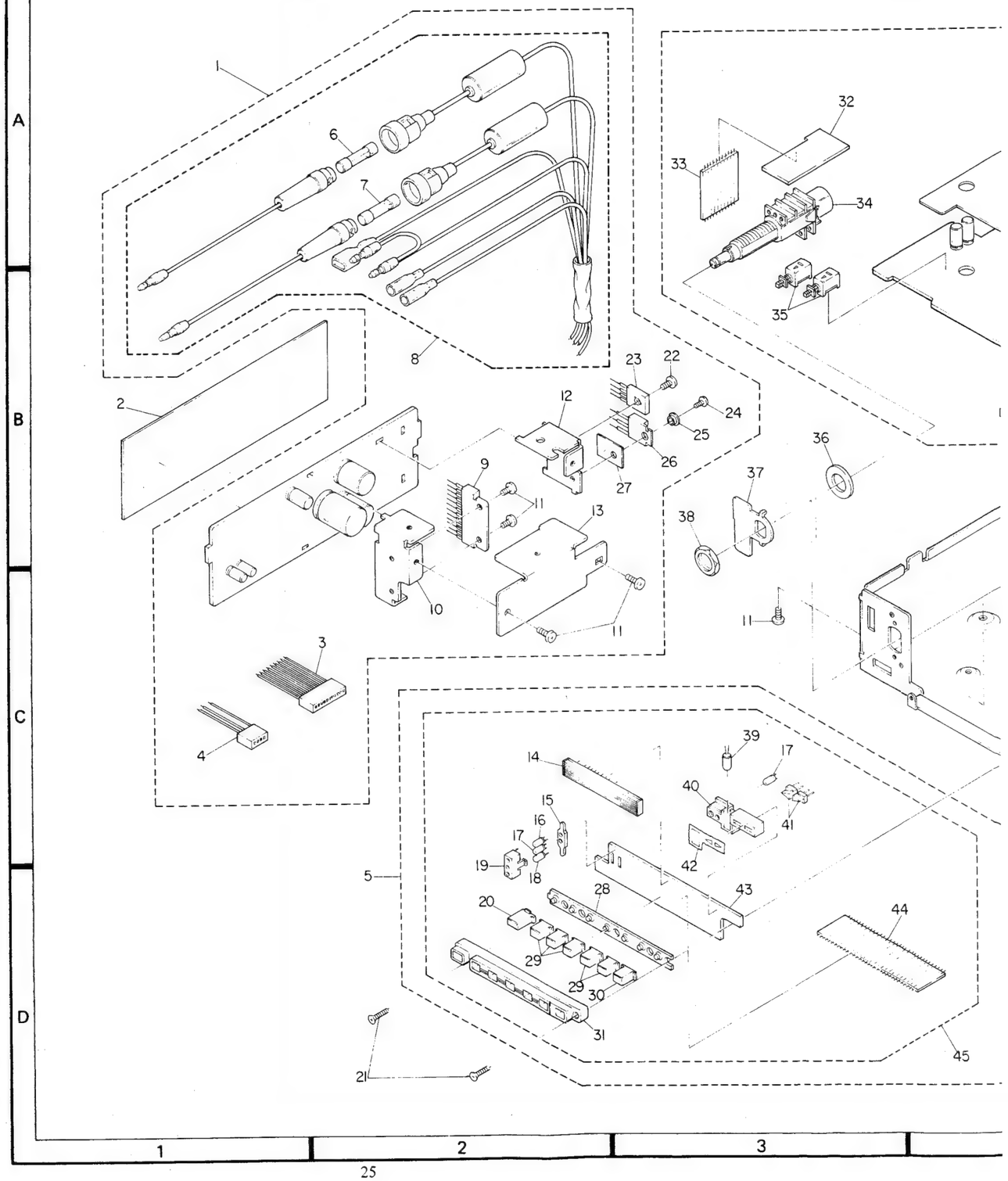


Fig. 14

9. CHASSIS EXPLODED VIEW



9. CHASSIS EXPLODED VIEW

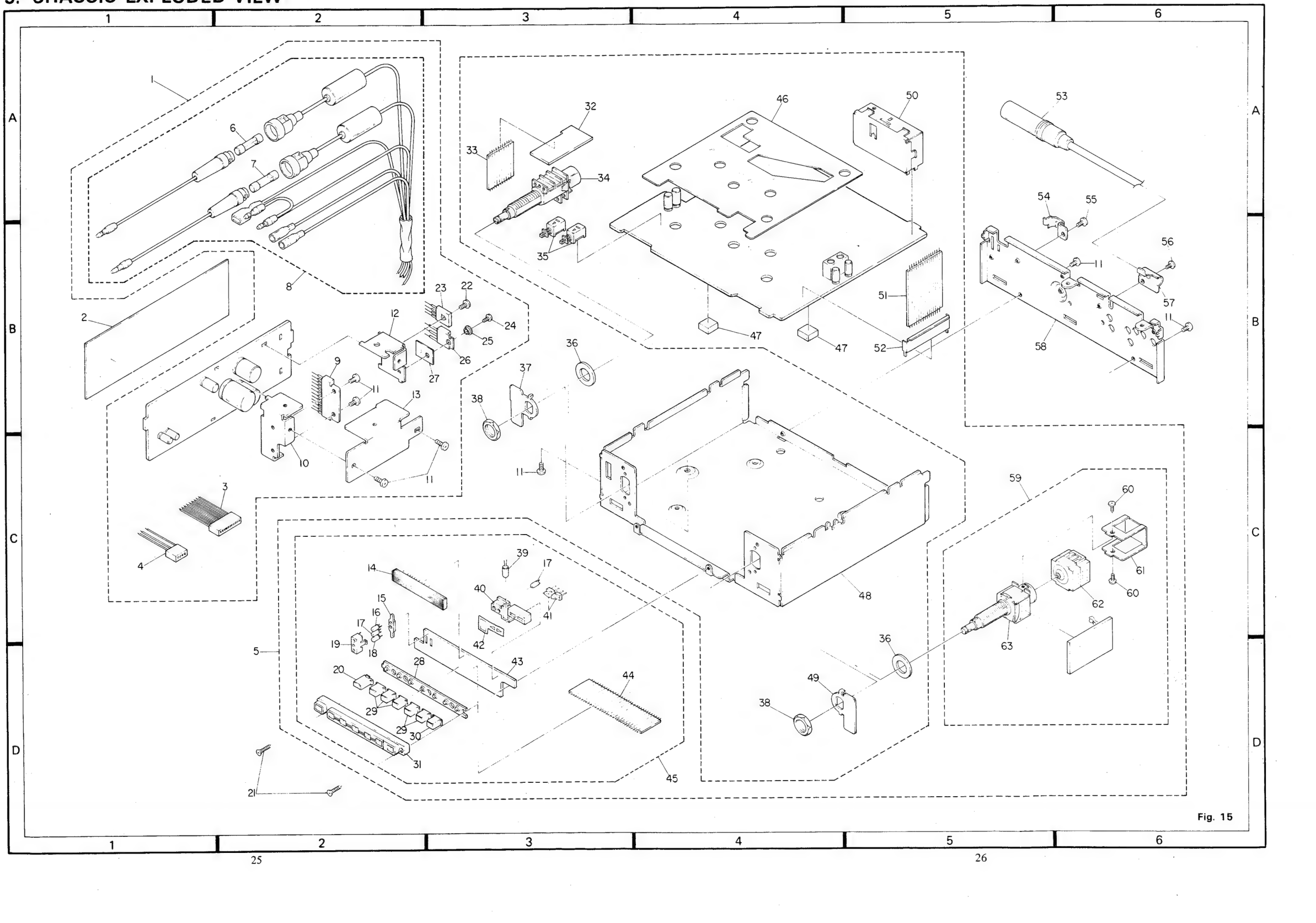


Fig. 15

10. PACKING METHOD

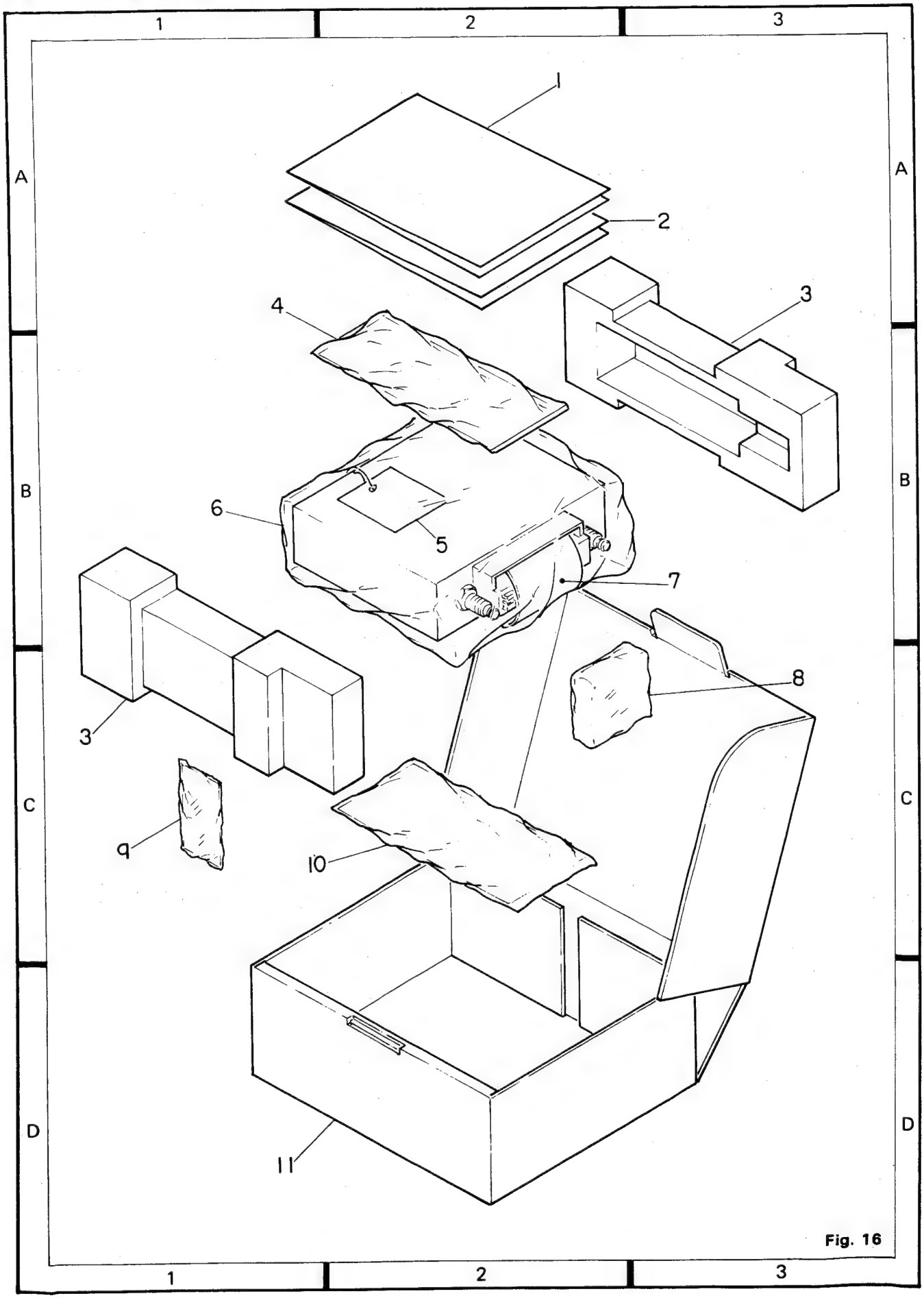


Fig. 16

11. PARTS LIST

NOTE:
When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω	*56×10^{1}*	*561*	*RD1/4PS 5 6 1 J*
47kΩ	*47×10^{3}*	*473*	*RD1/4PS 4 7 3 J*
0.5Ω	*OR5*		*RN2H O R 5 K*
1Ω	*O10*		*RS1P O 1 O K*

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ	*562×10^{1}*		*RN1/4SR 5 6 2 1 F*

- *Parts whose parts numbers are omitted are subject to being not supplied.*

Front End Unit (CWB-072) (KE-4000)

MISCELLANEOUS

Part No.	Symbol & Description	
SD306PA	Q1	
2SC1674	Q2	
2SC1675-M	Q3	
ITT310PC or ITT310PD	D1 — D3	
1S2790	D4	
MV-11	D5	
CTC-113	L1	Coil
CTC-116	L2	Coil
CTC-114	L3	Coil
CTF-015	L4	Ferri-Inductor, 0.82 μH
CTC-117	T1	IF Transformer
CCL-068	CG1	Capacitor (with discharge gap)
CCG-038	TC1 — TC3	Ceramic Trimmer

RESISTORS

Part No.	Symbol & Description	
RS1/8S□□□J	R1 — R15	
CCN-074	R16	82 kΩ

CAPACITORS

Part No.	Symbol & Description
VACANT	C1
CCSSH070D50	C2
CKSYB332K50	C3, C5 — C7, C13 — C15, C19, C22, C23
CCSSH180J50	C4, C10
CCSSH060C50	C8, C21
CCSCH040C50	C9
CCSCH010C50	C11
CCSCH271J50	C12
CCSSH330J50	C16
CCSTH100D50	C17
CCSTH120J50	C18
CCSTH040C50	C20

Front End Unit (CWB-073) (KE-4300)

MISCELLANEOUS

Part No.	Symbol & Description	
SD306PA	Q1	
2SC1674	Q2	
2SC1675-M	Q3	
ITT310PC or ITT310PD	D1 — D3	
1S2790	D4	
MV-11	D5	
CTC-113	L1	Coil
CTC-116	L2	Coil
CTC-114	L3	Coil
CTF-015	L4	Ferri-Inductor, 0.82 μH
CTC-117	T1	IF Transformer
CCL-068	CG1	Capacitor (with discharge gap)
CCG-038	TC1 — TC3	Ceramic Trimmer

RESISTORS

Part No.	Symbol & Description	
RS1/8S□□□J	R1 — R15	
CCN-073	R16	68 kΩ

CAPACITORS

Part No.	Symbol & Description
VACANT	C1
CCSSH080D50	C2
CKSYB332K50	C3, C5 — C7, C13 — C15, C19, C22, C23
CCSSH180J50	C4, C10
CCSSH060C50	C8, C21
CCSCH040C50	C9
CCSCH010C50	C11
CCSCH271J50	C12
CCSSH330J50	C16
CCSTH100D50	C17
CCSTH120J50	C18
CCSTH050C50	C20

PARTS LIST

Generator Unit (CWM-056) (KE-4000) (CWM-055) (KE-4300)

Part No.	Symbol & Description	
CXB-988	Generator	
1S1555 or 1S2076	D28	
CSG-148	S1	Switch
CWW-058	IB8	
RD1/4VM□□□J	R89	
RD1/4PM□□□J	R90	

Volume P.W. Board

Part No.	Symbol & Description	
CCS-245	VR1/S1	Volume/Switch 20 kΩ(A), 50 kΩ(G), 20 kΩ(B)
CSZAR15M35	C76, C77	

Display Unit (CWS-093)

Part No.	Symbol & Description	
BU-4170	LED Array	
AY3433S	D29	
PR3433S	D30, D32	
PG3433S	D31	
PG5532TX	D33, D34	
CEL-089	IL1	Lamp, 14V 40 mA

Amp Unit

MISCELLANEOUS

Part No.	Symbol & Description	
MB3106M	IC1	
HA1398	IC2	
LVC509	IC3	
2SB566	Q1	
2SC1213A-D or 2SC1214-D	Q2	
2SC2021 or 2SC2021LN	Q3—Q9	
1S1886 or SM-1A-02	D1, D2	
1S1555 or 1S2076 or 1S2473	D3—D6	
YZ-074A	D100	
CTF-002	L1	Coil, 0.5 mH
CTF-003	L2	Coil, 15 μH
T24-030	L3	Ferri-Inductor, 100 μH
CTH-035	L4	Coil, 10 μH
CWW-053	IB1	

RESISTORS

Part No.	Symbol & Description	
RD1/6PS□□□J	R1—R20, R25—R28, R32	
RD1/4VM□□□J	R21—R24, R31, R34—R36, R39—R41	
RD1/4PM□□□J	R33, R38	
RS1P□□□K	R37	
CCN-056	R100, R101	0Ω

CAPACITORS

Part No.	Symbol & Description	
CKDYB681K50	C1, C2, C9, C10	
CEA100M16LL	C3, C4	
CEA470M10LL	C5, C6	
CQMA103K50	C7, C8	
CKDYB221K50L	C11, C12	
CEA010M50LL	C13, C14	
CKDYB102K50L	C15, C16	
CEA101M10L	C17—C20, C29, C30	
CQMA104K50	C21, C22	
CCH-046	C23, C24	1000 μF/10V
CQMA102K50	C25, C26, C39	
CCH-050	C27	2000 μF/16V or 2200 μF/16V
CSZA4R7M25	C28	
CEA2R2M50LL	C31, C33	
CEA100M16L	C32, C34, C35	
CKDYF223Z50	C36—C38	

Tuner Unit

MISCELLANEOUS

Part No.	Symbol & Description
M5215L	IC1
LA1140	IC2
LA2101	IC3
LA3370P	IC4
PD4003-F	IC5
PD1002-F	IC6
2SA1048	Q1
2SC2458	Q2
2SK49-H2	Q3
2SA1048	Q4
2SC535-B	Q5
2SC460-B	Q6, Q7
2SK19-Y	Q8
2SA952	Q9
2SC1583	Q10
2SA798	Q11
2SC2021 or 2SC2021LN	Q12
2SA786	Q13
1S1555 or	D1, D2, D9—D11, D21

PARTS LIST

Part No.	Symbol & Description	
1S2076		
1S1555	D3 – D5, D18 – D20	
SVC303YAK	*D6 – D8	
MV-1	D12, D22 – D25	
1S2222	D13 – D17 (KE-4300)	
VACANT	D13 – D17 (KE-4000)	
XZ-062	D26	
XZ-068	D27	
CTH-063	L1	Coil, 470 μH
CTF-016	L2	Ferri-Inductor, 15 μH
CTB-095	L3	Coil, 33 μH
CTB-069	L4 (KE-4300)	Coil
CTH-049 or CTH-057	L4 (KE-4000)	Coil
CTB-081	L5	Coil, 2.2 μH
CTF-108	L6	Coil, 220 μH
T24-030	L7	Ferri-Inductor, 100 μH
CTB-071	L8 (KE-4300)	Coil, 1 mH
VACANT	L8 (KE-4000)	
CTC-094	L9	Coil, 680 μH
CTC-119	T1	Coil
CTC-120	T2	Coil
CTC-121	T3	Coil
CTB-072	T4	Coil, 210 μH
CTB-073	T5	Coil, 210 μH
CTE-108	T6	IF Transformer
CTB-075	T7	Coil
CTB-080	T8	Coil, 120 μH
CTB-074	T9, T10 (KE-4300)	Coil, 4.7 mH
CTB-077	T11 (KE-4300)	Coil, 750 μH
CTF-040	CF1 – CF3	Ceramic Filter
CCP-146	VR1	Semi-fixed, 15 kΩ(B)
CCP-145	VR2, VR3	Semi-fixed, 10 kΩ(B)
CCP-081	VR4	Semi-fixed, 100 kΩ(B)
CCP-078	VR5 (KE-4300)	Semi-fixed, 22 kΩ(B)
VACANT	VR5 (KE-4000)	
CCP-051	VR6	Semi-fixed, 680 Ω(B)
CCG-030	TC1, TC2	Ceramic Trimmer, 20 pF
CWW-061	IB1	
CWW-062	IB2	
CWW-063	IB3	
CWW-064	IB4	
CWW-055	IB5 (KE-4300)	
CWW-065	IB5 (KE-4000)	
CWW-056	IB6	
CWW-057	IB7	
CSG-130	S1, S2	Switch

RESISTORS

Part No.	Symbol & Description	
RD1/4VM□□□J	R1 – R6, R9 – R43, R51 – R55, R56 – R58 (KE-4300), R60 – R63 (KE-4300), R93 – R96	
RD1/4PM□□□J	R7, R8, R45 – R49, R67, R84 – R86	
RD1/6PS□□□J	R64 – R66, R73 – R83, R97, R98, R99 (KE-4000), R100 (KE-4000)	
RD1/2PS□□□J	R87, R88	
CCN-054	R50	27 kΩ/1/4W
CCN-055	R59 (KE-4300)	8.2 kΩ/1/4W
CCN-085	R69, R70	22 kΩ/1/4W
CCN-086	R71, R72	4.7 kΩ/1/4W
CCN-034	R91	1.2 kΩ/1/4W
CCN-052	R92	4.7 kΩ/1/4W
VACANT	R44, R56 – R63 (KE-4000), R68, R89, R90	

CAPACITORS

Part No.	Symbol & Description
CKPVYY223N16	C1, C86
CEA0R1M50LL	C2, C3
CKDBC473M25	C4, C45, C49, C51
CEA100M16NP	C5
CCPVSL101J50	C6
CEA4R7M35LL	C7
CEA010M50LL	C8, C35, C38
CKDSA681J50	C9, C10
CQMA122J50	C11
CKDSA680J50	C12
CQMA682J50	C13
CKDSA561J50	C14, C15
CKDSA102J50	C16
CQMA152K50	C17, C72, C73
CEA470M10L	C18, C46, C47
CKDSA271J50	C19, C21 – C23
CCDSL050D50	C20
CQMA103K50	C24
CEA101M10L	C25, C78, C79, C84
CEA4R7M16NP	C26
CEAR22M50LL	C27, C56
CEA100M16L	C28, C41
CQMA153K50	C29
CQSAH102J50	C30
CEA221M10L	C31, C54
CSZA2R2M16	C32, C33
CSZAR68M35	C34
CQMA183J50	C36, C37
CKDYB222K50	C39, C63 (KE-4300), C64
CKDYB121K50	C40
CQMA333K50	C42, C43, C53, C57, C67 (KE-4300), C71 (KE-4300)
CKDYD103M50	C44
CKDYF103Z50	C48
CKDBB103M25	C50

PARTS LIST

Part No.	Symbol & Description
CEA470M10LL	C52
CQMA183K50	C55
CCDPH271J50L	C58 (KE-4000)
CCDPH301J50L	C58 (KE-4300)
CCDPH151J50L	C59
CCDCH010D50 or CCDCH020D50 or CCDCH030D50 or CCDCH040D50	*C60 (KE-4300)
CCDCH060D50 or	*C60 (KE-4000)
CCDCH070D50 or CCDCH080D50 or CCDCH090D50	
CCDXK090D50	C61 (KE-4300)
CCDWK100F50	C61 (KE-4000)
CCDXK270J50	C62 (KE-4300)
CCDVK330J50	C62 (KE-4000)
CKDYB471K50	C63 (KE-4000)
CSZAH3R3M16	C65 (KE-4300), C66 (KE-4300), C68 (KE-4300)
CCDPH090D50	C69 (KE-4300)
CCDPH680J50	C70 (KE-4300)
VACANT	C65 – C71 (KE-4000)
CSZAR22M35	C74, C75
VACANT	C76, C77
CSZA2R2M16	C80
CSZAR47M35	C81
CSZA4R7M10	C82
CSZA010M25	C83
CEA221M16L	C85
VACANT	C87
CKDYF103Z50L	C88 (KE-4000)
VACANT	C88 (KE-4300)
CCDCH060D50	C89 (KE-4300)

Caution:
Diodes *D6-D8 and capacitor *C60 used mutually in the following assembly.

KE-4000

D6-D8	C60
SVC303YAK-25	CCDCH060D50
SVC303YAK-24	CCDCH070D50
SVC303YAK-23	CCDCH080D50
SVC303YAK-22	CCDCH090D50

KE-4300

D6-D8	C60
SVC303YAK-25	CCDCH010D50
SVC303YAK-24	CCDCH020D50
SVC303YAK-23	CCDCH030D50
SVC303YAK-22	CCDCH040D50

Motor P.W. Board

Part No.	Symbol & Description	
1S1886 or W03A or SR1K2	D1	
1S1555	D2	
CKDYF103Z25	C1, C2	
CEA330P16	C3	
RS2P□□□J	R1	
CSL-025	S1	Switch

Switch Unit

Part No.	Symbol & Description	
CSH-062	S1	Switch

Sensing P.W. Board

Part No.	Symbol & Description
1S1886	D1

Miscellaneous Parts List

Part No.	Symbol & Description	
CSL-022	S1, S2	Switch
CSN-058	S3	Switch
E21-603	FU1	Fuse, 4A
E21-007	FU2	Fuse, 0.5A
CXM-059	M	Motor
CPB-049	HD	Head
CXP-028	SO	Solenoid

PARTS LIST

Cabinet

Key No.	Part No.	Description
1.	CAA-325	Knob
2.	CAA-322	Knob
3.	CBN-016	N10ϕ × 3t
4.	CND-646	FW10ϕ × 1t
5.	CEA-404	Panel (KE-4000)
	CEA-403	Panel (KE-4300)
6.	CNV-769	Washer
7.	CMZ26P060FMC	Screw
8.	CBH-543	Spring
9.	CXC-099	Button Unit
10.	CXC-098	Button Unit
11.	CXC-090	Grille Assy (KE-4000)
	CXC-091	Grille Assy (KE-4300)
12.	CAT-097	Door
13.	BMZ30P040FMC	Screw
14.	CXC-101	Case Unit
15.	BMZ20P140FMC	Screw
16.	CSL-022	Switch
17.	BMZ26P040FMC	Screw
18.	CKS-089	Plug
19.		Sensing Unit
20.		Cassette Mechanism Unit
21.		Spacer
22.	CAC-324	Button
23.	BMZ26P030FUC	Screw

Chassis

Key No.	Part No.	Description
1.	CWK-231	Amp Assy
2.		Insulator
3.	CDE-766	Connector
4.	CDE-765	Connector
5.	CNE-368	Tuner Assy (KE-4000)
	CNE-367	Tuner Assy (KE-4300)
6.	E21-603	Fuse, 4A
7.	E21-007	Fuse, 0.5A
8.	CDE-767	Cord
9.	HA1398	IC
10.		Heat Sink
11.	BMZ30P040FMC	Screw
12.		Heat Sink
13.		Shield
14.	BU-4170	LED Array
15.	CNM-639	Spacer
16.	AY3433S	LED
17.	PR3433S	LED
18.	PG3433S	LED
19.	CNW-138	Holder
20.		Button
21.	CMZ20P090FUC	Screw
22.	BMZ30P050FMC	Screw
23.	LVC509	IC
24.	BMZ26P050FMC	Screw

Key No.	Part No.	Description
25.	B21-679	Insulating Bushing
26.	2SB566	Transistor
27.	CNM-030	Insulating Plate
28.	CNW-141	Rubber
29.		Button
30.		Button
31.		Houshing
32.		P.W. Board
33.	CDE-764	Connector
34.	CCS-245	Volume/Switch
35.	CSG-130	Switch
36.	CBE-084	Spacer
37.		Holder
38.	CBN-028	Nut
39.	CEL-089	Lamp, 14V 40 mA
40.		Holder
41.	PG5532TX	LED
42.		Spacer
43.		P.W. Board
44.	CDE-762	Connector
45.	CWS-093	Display Unit
46.		Insulator
47.	CNW-078	Spacer
48.	CNA-167	Chassis
49.		Holder
50.	CWB-072	Front End Unit (KE-4000)
	CWB-073	Front End Unit (KE-4300)
51.	CDE-763	Connector
52.		Holder
53.	CDH-057	Antenna Cable
54.	CNE-482	Clamper
55.	BMZ30P060FMC	Screw
56.	BMZ26P060FMC	Screw
57.	CNE-855	Clamper
58.		Sub Chassis
59.	CWM-056	Generator Unit (KE-4000)
	CWM-055	Generator Unit (KE-4300)
60.	PMZ20P030FMC	Screw
61.		Holder
62.	CXB-988	Generator
63.	CSG-148	Switch

PARTS LIST

Packing Method

Key No.	Part No.	Description
1.	CRD-131	Owner's Manual (KE-4300) (English/French/German/Spanish)
	CRD-135	Owner's Manual (KE-4000) (English/French/German/Spanish)
2.	CRD-132	Owner's Manual (KE-4300) (Swedish/Norwegian/Dutch/Italian)
	CRD-134	Owner's Manual (KE-4000) (Swedish/Norwegian/Dutch/Italian)
3.	CHB-922	Styrofoam (1 set pair)
4.	CEA-403	Panel (KE-4300)
	CEA-404	Panel (KE-4000)
5.		Tag
6.	E36-622	Polyethylene Bag
7.		Label
8.	CEA-402	Knob Kit
8-1.	CAA-322	Knob
8-2.	CAA-325	Knob
9.	CEA-253	Holder Kit
9-1.	BMZ40P060FMC	Screw
9-2.	WHX0FMC	Washer
10.	CEA-300	Accessory Kit
10-1.	CNC-975	Strap
10-2.	CDE-437	Cord
10-3.	CNV-769	Washer
10-4.	CEA-215	Screw Kit
10-4-1.	CBA-028	Screw for Strap
10-4-2.	B70-055-A	WN4ϕ × 4.5t
10-4-3.	WS40FMC	Washer
10-4-4.	PMB50P200FMC	Screw
10-4-5.	B70-056-A	WN5ϕ × 5.3t
10-4-6.	CND-646	FW10ϕ × 1t
10-4-7.	CBN-016	N10ϕ × 3t
11.	CHB-895	Carton (KE-4300)
	CHB-897	Carton (KE-4000)